

Remarks/Arguments:

Favorable reconsideration of this application, in light of the present amendments and following discussion, is respectfully requested.

Claims 9-16 are pending; Claims 1-8 are cancelled and Claims 9-16 are newly added herewith. As support for newly added Claims 9-16 may be found, for example, at page 1, lines 5-7, and as Claims 9-16 represent amended versions of Claims 1-8, it is respectfully submitted that no new matter is added by this amendment.

In the outstanding Office Action, the title of the invention was objected to; and Claims 1-8 were rejected under 35 U.S.C. § 102(a) as unpatentable over Kyocera Corp. (JP 2000-114354A, hereafter JP ‘354).

In response to the objection to the title, the title has been amended herewith to recite “Device Used To Produce Or Examine Semiconductors.” Therefore, it is respectfully submitted that this objection is overcome. However, if the Examiner disagrees, it is respectfully requested that an alternative title be provided in the next Office Action.

With regard to the rejection of Claims 1-8 under 35 U.S.C. § 102(a) as unpatentable over JP ‘354, that rejection has been rendered moot by the cancellation of Claims 1-8. Because the subject matter of Claims 9-16 corresponds to amended versions of Claims 1-8, this rejection will be addressed with regard to Claims 9-16.

Claim 9 relates to a semiconductor producing/examining device used to produce or examine semiconductors that includes a supporting case and an external terminal connected to the conductor layer, the external terminal being pressed on the conductor layer or the external terminal being pressed on another conductor layer connected to the conductor layer.

In a ceramic heater where an external terminal is soldered with a solder material, the adhesive force of the solder material decreases when the ceramic heater is used at high temperatures, since the solder material deteriorates or a void forms. In some circumstances,

the external terminal may detach from the ceramic substrate.¹ Additionally, even when the external terminal does not detach, heat is generated at the connecting portion, or a current flowing in the entire resistive heating element may change. For this reason, the temperature control of the ceramic substrate deteriorates.²

By contrast, as recited in Claim 9, since the external terminal is pressed on the conductor layer, a connection between the conductor layer and the external terminal may be maintained for a long period of time. In addition, the ceramic substrate may easily be removed from a supporting case.

The benefits of the features of Claim 9 are evident from the comparison between Examples 1-3 and Comparative Examples 1 and 2 in the present specification at pages 37-39. The solder materials in the ceramic heaters according to Comparative Examples 1 and 2 began to deteriorate and fell away after the heat cycle test. By contrast, using the features of Claim 9 as evidenced in Examples 1-3, the connection portions maintained preferred connection states in the ceramic heaters after the heat cycle test.

JP ‘354 relates to a ceramic heater including a plate-shaped ceramic body 2 and a resistance heating element 3. An external terminal 7 is connected to the resistance heating element 3. However, JP ‘354 does not disclose or suggest a supporting case. The ceramic body 2 of JP ‘354 is not a supporting case, but corresponds to the ceramic substrate as recited in Claim 1. Accordingly, it is respectfully submitted that the Office Action has failed to satisfy its burden under 35 U.S.C. § 102(a), and it is respectfully submitted that Claim 9 patentably distinguishes over JP ‘354, as JP ‘354 does not disclose or suggest the case of Claim 9 (which was originally recited in Claim 1).

Additionally, the external terminal 7 of JP ‘354 is connected to the resistance heating element 3 by soldering. As earlier explained, soldering materials in a ceramic heater

¹ Specification, page 2, lines 5-13.

² Id. at lines 14-20.

deteriorate when the ceramic heater is used at high temperatures. From this description, it is evident that JP '354 teaches away from the external terminal configuration recited in Claim 9.

With regard to Claim 10, which corresponds to an amended version of the canceled subject matter of Claim 2, it is respectfully submitted that Claim 10 is not in product-by-process form. More specifically, Claim 10 recites that the device includes an elastic body, and the elasticity of the elastic body is used to connect the external terminal and the conductor layer or to connect the external terminal and another conductor layer.

JP '354 does not disclose or suggest using elasticity of an elastic body to connect the resistance heating element 3 with the external terminal. Accordingly, it is respectfully submitted that Claim 10 recites features that additionally patentably distinguish Claim 10 over JP '354.

Accordingly, Applicants respectfully submit that Claims 9-16 patentably distinguish over JP '354, as JP '354 fails to disclose or suggest the features recited in Claims 9 and 10, from which Claims 11-16 depend.

Consequently, in view of the foregoing discussion and present amendments, it is respectfully submitted that this application is in condition for allowance. An early and favorable action is therefore respectfully requested.

Respectfully submitted,

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